

**REMARKS**

Claims 1, 2, 14, 16, 17 and 23 are pending in this application. By this Amendment, claim 1 is amended. No new matter is added.

Applicants appreciate the courtesies extended by Examiner Ridley and Primary Examiner Griffin to Applicants' representative during the personal interview conducted on January 15, 2004. Applicants' separate record of the substance of the interview is incorporated into the foregoing amendments and following remarks.

The purpose of the interview was to discuss the Office Action mailed August 18, 2003 and the Amendment filed December 18, 2003 in response thereto. The primary emphasis of the discussion was directed to independent claim 1.

Applicants' representative argued that Van Hook fails to disclose the controller executes a normal operation of the reformer and a carbon removal process for removing carbon deposited on the reforming catalyst under a predetermined condition, by controlling at least one of an amount of the raw fuel supplied to the reformer and an amount of the oxygen supplied to the reformer so that an O/C ratio of the number of oxygen atoms O supplied from the oxygen supply device to the number of carbon atoms contained in the raw fuel supplied from the raw fuel supply device becomes larger than an appropriate range of the O/C ratio that is to be established during the normal operation of the reformer, as recited in claim 1.

However, the Examiner stated that Van Hook discloses each of the claimed features. In particular, Examiner Ridley stated that Van Hook operates in a cyclic process such that carbon laid down during reaction would be burned off during the catalyst regeneration cycle (col. 2, lines 42-45). Applicants' representative then argued that Van Hook depends on steam-to-carbon ratio, whereas Applicants' invention controls the amount of oxygen-to-carbon O/C supplied to the reformer. However, the Examiner was not responsive and asserted that it would be inherent to control the amount of oxygen and raw fuel to be supplied

to the reformer because all fuel reforming devices include control of oxygen and carbon.

However, Applicants argued that the Van Hook fails to disclose the O/C ratio increases when an appropriate range of the O/C ratio is established during the normal operation of the reformer, and that Van Hook specifically teaches away from using oxygen (col. 2, lines 54-64). The Examiner asserted that the burning of carbon requires oxygen in any fuel reforming apparatus.

However, Examiner Ridley stated that if Applicants amended claim 1 to include some features found in canceled claims 3-13, she indicated that further consideration and search will be given to determine the patentability of the invention.

**I. The Claims Define Patentable Subject Matter**

The Office Action rejects claims 1-2, 14, 16-17 and 23 under 35 U.S.C. §102(b) as being anticipated by Van Hook et al. (hereinafter "Van Hook"), U.S. Patent No. 4,026,82; and rejects claims 2 and 17 under 35 U.S.C. §103(a) as being unpatentable over Van Hook. The rejections are respectfully traversed.

As suggested during the interview, Van Hook fails to disclose the controller selects one of a plurality of carbon removal modes that are prepared in advance, depending upon the amount of the accumulated carbon, the carbon removal process is carried out in the selected carbon removal mode, as recited in claim 1.

Van Hook merely discloses removing carbon deposits at high ratio of steam-to-carbon, and fails to disclose or mention the controller selects from a plurality of carbon removal modes.

For at least these reasons, Applicants respectfully submit that Van Hook fails to disclose or render obvious the features recited in independent claim 1. Claims 2, 14, 16, 17 and 23, which depend from independent claim 1 are likewise distinguishable over the applied

art for at least the reasons discussed, as well as for the additional features they recite.

Reconsideration and withdrawal of the rejections are respectfully requested.

## II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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